

Attorney Docket No.: C4325(C)
Serial No.: 10/574,610
Filed: April 4, 2006
Confirmation No.: 4215

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended) A continuous process for making a particulate detergent composition or component which comprises feeding starting materials comprising a surfactant acid precursor of an anionic surfactant and a particulate alkaline neutralising agent into a mixer/granulator to produce a granulated product stream, characterised in that a fraction of the product stream is cooled and recycled into the mixer/granulator, the recycle stream being from 30 to 50% of the mass flow rate of the product stream and wherein the recycle stream immediately after separation from the product stream contains particles which have a number average particle size which is less than that of the product stream, and wherein the product stream comprises a heat-sensitive anionic surfactant selected from the group consisting of C12-C18 fatty alcohol sulphate, alkyl ether sulphate, glycerol ether sulphate, monoglyceride ether sulphates, monoglyceride sulphates, hydroxyl mixed ether sulphates and fatty acid isethionates.

Claim 2 (Original) A process according to claim 1, wherein the temperature of the recycle stream is at least 10°C below, preferably at least 20°C below, more preferably at least 30°C below, more preferably at least 40°C below, most preferably at least 50°C below that of the mixer/granulator.

Claim 3 (Currently Amended) A process according to claim 1 ~~or claim 2~~, wherein the recycle stream immediately after separation from the product stream contains particles

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which have a number average particle size which is less than 50% of that of the product stream, more preferably less than 30% of that of the product stream.

Claim 4 (Currently Amended) A process as claimed in ~~any preceding claim 1~~, wherein the recycle stream has a surfactant concentration which is within 5%, preferably within 3%, ideally within 2%, of that of the product stream.

Claim 5 (Currently Amended) A process as claimed in ~~any preceding claim 1~~, wherein the product stream enters a fluidised bed and an exit stream from the fluidised bed is the recycle stream.

Claim 6 (Currently Amended) A process as claimed in ~~any preceding claim 1~~, wherein the temperature in the mixer/granulator is no greater than 100°C, preferably no greater than 80°C

Claim 7 (Currently Amended) A process as claimed in ~~any preceding claim 1~~, wherein the starting materials comprise a first feed stream comprising at least 10 wt% of surfactant acid precursor and a second feed stream comprising a particulate alkaline neutralising agent and optionally an additional feed stream in addition to the recycle stream.

Claim 8 (Currently Amended) A process as claimed in ~~any preceding claim 1~~, wherein the starting materials comprise a heat-sensitive surfactant or acid precursor thereof.